AMENDMENTS TO THE CLAIMS

Please amend applicant's claims, without prejudice, to read as follows:

1. (Currently Amended). Device for the pixel-by-pixel photoelectric measurement of a planar or flat object to be measured, comprising

a two-dimensional array of light converter elements for producing electric signals in response to light remitted by the object to be measured;

imaging means for imaging the object to be measured onto the two-dimensional array of light converter elements;

filters provided in the imaging light path for wavelength selective filtering of the measurement light impinging on the light converter elements;

signal processing means for processing the electrical signals produced by the light converter elements and for converting them into corresponding digital raw measured data; and

data processing means for processing of the raw measured data into image data representing the colors of the individual pixels of the measured object, the data processing means being constructed for carrying out a scattered light correction for reducing scattered light influences;

wherein the data processing means is constructed for calculating from the measured data of the measured object or object to be measured a scattered light image and subtracting the latter pixel-by-pixel from the measured data of the measured object.

2. (Cancelled).

3. (Currently Amended). Device according to claim ~~2~~ 1, wherein the data processing means is constructed for carrying out the calculation of the scattered light image at binary graduated resolutions, whereby for each image point a number of analysis regions of graduated resolution and surrounding the image point are selected, and beginning with the largest analysis region and the coarsest resolution the scattered light contribution of each analysis region to the inwardly next analysis region with the next finer resolution is calculated, and the scattered light contribution at the highest resolution is only calculated for the innermost analysis region.

4. (Original). Device according to claim 3, wherein the data processing means is constructed for calculating the scattered light contributions of the individual analysis regions by way of scattered light correction coefficients, whereby each level of resolution is associated with its own set of scattered light coefficients and the scattered light coefficients of each level of resolution describe those scattered light portions which are received by one image point of the respective level of resolution from the other image points of the same level of resolution.

5. (Original). Device according to claim 4, wherein the data processing means is constructed for calculating the scattered light contributions of the individual analysis regions by way of calibrated scattered light correction coefficients, whereby the sets of scattered light coefficients each associated with one level of resolution are weighted by a calibration factor and the calibration factors are selected such that a residual error remaining after the scattered light correction is minimal.

6. (Original). Device according to claim 1, wherein the data processing means is constructed for limiting the scattered light correction to selectable regions of the object to be measured or the measured object.

7. (Original). Device according to claim 1, wherein the data processing means is constructed for carrying out a geometry correction for compensating the geometric distortions generated by the imaging means.

8. (Original). Device according to claim 7, wherein the data processing means include a correction table in which are stored for each image point the position deviations relative to a nominal position determined by way of a test image, and wherein the data processing means is constructed for correcting the position of each image point on the basis of the position deviations stored in the correction table.

9. (Original). Device according to claim 8, wherein in the correction table the same position deviations are respectively associated with a small region of adjacent image points.

10. (Original). Device according to claim 1, wherein the data processing means is constructed for carrying out a reflex correction for reducing reflection effects.

11. (Original). Device according to claim 10, wherein the data processing means is constructed for calculating a point-symmetrical reflection image from the measured data of the measured object and subtracting the same pixel-by-pixel form the measured data of the measured object.

12. (Currently Amended). Device according to claim ~~28~~ 11, wherein the data processing means is constructed for carrying out the calculation of the reflection image at a lower resolution than that of the measured data.

13. (Currently Amended). Device according to claim 1, wherein the data processing means is constructed for carrying out a white ~~normalisation~~ normalization, whereby the measured data of the measured object or object to be measured are normalized to the brightness values of a white reference field.

14. (Currently Amended). Device according to claim 1, wherein the data processing means is constructed for carrying out a white border ~~normalisation~~ normalization, whereby for each measurement the brightness of a white border region is determined and the measured data are normalized to the mean brightness of this border region.

15. (Original). Device according to claim 1, wherein the data processing means is constructed for carrying out a spectral correction for consideration of the spectral characteristic of interference filters depending on the angle of incidence of the light beams.

16. (Original). Device according to claim 15, wherein an interpolation matrix is stored in the data processing means respectively for a preselected number of angles of incidence, the data processing means are constructed for assigning a discrete angle of incidence to each image point on the basis of its relative location on the measured object, and for correcting the spectrum of the respective image point formed by the measured data, by way of the interpolation matrix respectively associated with the discrete angle of incidence.

17. (Currently Amended). Device according to claim 1, wherein ~~the~~ a two-dimensional converter element array and the imaging means are constructed as a video camera with a two-dimensional image sensor and an imaging lens with an entry shutter.

18. (Original). Device according to claim 17, wherein the video camera is a black and white camera and the filter means include a set of bandpass filters constructed as interference filters for the wavelength-selective filtering of the measuring light impinging on the light converter elements, and drive means for selectively moving the bandpass filters into the imaging light path.

19. (Original). Device according to claim 18, wherein the drive means are constructed for sequentially moving the bandpass filters into the imaging light path.

20. (Currently Amended). Device according to claim 18, wherein about 16 bandpass filters of about 20 nm bandwidth each are provided which essentially cover the spectral range of 400-700 nm.

21. (Original). Device according to claim 18, wherein the bandpass filters are mounted on a rotatable filter wheel.

22. (Original). Device according to claim 1, wherein the filter means for the wavelength-selective filtering of the measuring light impinging on the light converter elements are constructed as bandpass filters positioned directly onto the light converter elements.

23. (Original). Device according to claim 1, including several video cameras each with a two-dimensional image sensor and an imaging lens with an entry shutter, whereby each video camera is constructed for the measurement of a different wavelength range.

24. (Original). Device according to claim 23, wherein each video camera is constructed for the measurement of a different wavelength range by the inclusion of upstream bandpass filters.